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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/046,783

01/17/2002

Dong Zhong

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2663

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12/06/2004

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EXAMINER

ABRAMS, NEIL

ART UNIT

PAPER NUMBER

2839

DATE MAILED: 12/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/046,783

Applicant(s)

DONG ZHONG

Examiner

Neil Abrams

Art Unit

2839

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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New spec and new drawings are approved.

Abstract objected to it should be rewritten to refer to spacing feature with adequate details.

Figs. 1, 2, 3, 4 appear to disclose prior art.

If that is the case they must be so labeled.

In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Marked-up Drawings" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Claims 21 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Reference to fig. 5d ^{in claim} is improper.

Claims 1-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The disclosure is unclear as to enablement for reasons noted below.

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Fig. 5 discloses contact portions 230 at close spacing in each pair however, note that pins portions 140 are spaced closer for adjacent pairs than for contacts 210 of each pair.

This seems opposite to the intended crosstalk reduction effect to be accomplished by closer spacing of contacts of each pair.

Clarification is required.

Claims 1-22, 25, 26 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Cohen.

Cohen discloses a grid system (see fig. 1) with differential pairs 207 (Fig. 4) the contacts of each pair being spaced closer than the space $2p$ between adjacent pairs.

Also see fig. 5A grid array ^{with} contacts pairs at 521 spaced closely and larger separation between adjacent pairs. Fig. 10 socket system also applied. Any one of these systems meets claim language. The connections shown are for mounting on substrates 14, 16.

Claims 2-22 met by Cohn so applied.

For claims 25, 26, obvious to read fig. 4 pin/socket connection areas on the inner legs of the paired connection forks at 212 and the socket plates on the leads 202f, 202e. So read fig. 4 meets claim language. For claim 26 third socket pin/socket connection areas is on fork arm just below numeral 210.

Viewed in such manner Cohen system meets claim language.

For all claims should issues arise, recited features deemed obvious variations.

Claims 1-22, 25, 26 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kline.

For Kline see fig. 1 differential pairs 24 and fig. 4 at 96, all spaced as recited in claims and for mounting on substrates (not shown), see col. 1, lines 10-20. Should issues arise recited features deemed obvious variations. Kline system also covers claims 2-22, 25, 26. For claims 25, 26, Kline fig. 4 is applied with pin/socket connection areas read on innermost fork arms of pair at 96 and outer fork arm of a next adjacent contact of pair at leadline 102.

For all claims should issues arise, recited features deemed obvious variations. Claim 20 read on fig. 4 leads 92 of the socket pairs 96 or on selected arms of forks of pairs 96.

Claim 23 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yaegashi.

See fig. 7 pin grid system with first contact to left of 14A second one just to right of numeral 12 and third one at 12a, the third one at 180 degrees from the others should issues arise, recited features deemed obvious variations.

Claims 1-26 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Rothenberger.

For claims 1-19, see fig. 1, differential pairs at 90 arranged with close spacing at each pair and wide spacing between pairs and the contacts mounted to a substrate 24, the contacts 90 forming differential pairs, col. 1, lines 55-65. For claim 23, see fig.

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2, contacts 35, 39 array on top side of substrate 12 with two contacts oriented to right and one at 39 oriented to left (180 degree rotation).

For all claims should issues arise, recited features deemed obvious variations.

Claim 20, term socket plates as broadly stated reads on contacts 90. Claims 25, 26

term differentials as used with no current direction terms reads on fig. 2 arrangement of


contacts 35, 39. ^P Claims 23, 24 are rejected as anticipated by (35 USC 102) or alternatively obvious (35 USC 103) over Ortega. ^P

Ortega, figs. 5B 10 discloses a grid array connector with contacts 55(1), 55(2), in a pair. With an adjacent pair to the left the contact 55 would be at 180 degrees from those to its sides. For claims 24, the contacts 55(1), 55(2) and an additional contact form ~~a~~ pairs with plates at position 45 that meet claim language. Should issues arise, recited features considered obvious variations. ^P Arguments are moot in view of new references applied.

Any inquiry concerning this communication should be directed to Neil Abrams at telephone number (571)272-2089.

Abrams/ds

11/06/04


NEIL ABRAMS
EXAMINER
ART UNIT 322